



### Specifications

		23S...-0	23M...-0	23L...-0	34M...-1	34L...-1
Input Power, Nominal ( $\pm 10\%$ )	VDC	14-48				
Input Power, Current Maximum	A	4.5				
Auxiliary Input Power, Nominal ( $\pm 10\%$ )	VDC	6-24				
Auxiliary Input Power, Maximum	W	1				
Resistance	ohm	0.75	0.75	1.2	0.35	0.49
Inductance	mH	2.2	3.1	6.2	3	5.4
Detent Torque	mNm	40	70	120	250	350
Overhang Load Limit	kg	0.6	1	1.5	2.7	3.8
Rotor Inertia	$g \cdot cm^2$	260	460	750	1850	2750
Continuous Output Current	A	4.5				
Peak Output Current (application dependent)	A	6.5				
Step Angle	deg	1.8				
Magnetic Encoder, Resolution	ppr	4096				
Circuit Loss	W	6				
Weight	kg	0.6	1.0	1.5	2.7	3.8
Connection Hardware Screw Size/Torque	Nm	3	3	3	5.2	5.2
Under-Voltage Trip, Nominal	VDC	Logic				
Over-Voltage Trip	VDC	Logic				

## Control

Feature	Specification	
<b>Operation Modes</b>	Selectable	Profile position, Velocity, Profile velocity, Profile torque, Homing, Cyclic synchronous position
<b>Display</b>		Bi-color LED
<b>Software Tools</b>	User Interface	ServoStudio Windows-based application
	Functions	Connection settings, Drive info, Power info, I/O configuration, Motion settings and tuning, Fault history/display
<b>Rotary Units</b>	Position	counts
	Velocity	rpm/100
	Acceleration/Deceleration	rpm/100/s

## Communication

Feature	Specification
<b>CANopen</b>	CANopen – CiA 301 application layer and CiA 402 device profile for drives and motion control Baud rate 10 kbps – 1 Mbps CAN ID 1 – 126 (Default 101) Heartbeat producer, SDO, PDO (variable mapping)

## Protection and environment

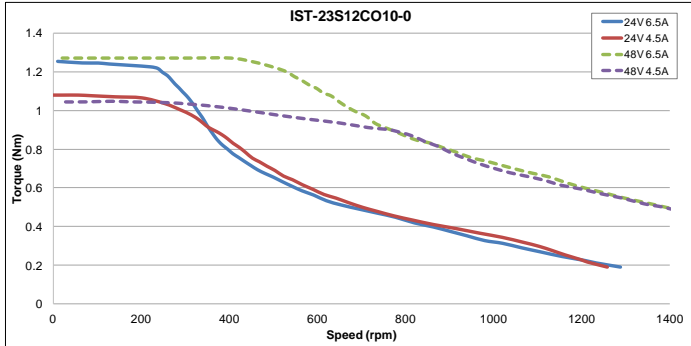
Feature	Specification
<b>Protective Functions</b>	I <sup>2</sup> T limit, Over-voltage, Under-voltage, Drive over-temperature, Over-speed, Velocity error, Position error, Magnet missing, Power stage fault, PLL lock lost, Position command error, Acceleration / deceleration violation
<b>Standards</b>	IP20 CE, IP65 CE Pending
	UL Pending
<b>Environment</b>	Ambient temperature: Operation 0 – 40°C, Storage 0 – 70°C
	Heat sink max. temperature: 100°C
	Motor max. temperature: 120°C
	Humidity: 10 – 90%
	Altitude: If in accordance with specified clearances, per IEC 61800-5-1, the stepIM is rated for use at altitudes up to 2000m
	Vibration: under review
<b>Operating Conditions</b>	Protection class: IP20 or IP65 Pollution degree: 2 as per IEC 60664-1 Do not use where the following are present: corrosive gases, flammable gases, water, oil, chemicals, dust (including iron dust and salts)
<b>Configuration</b>	Flange mounting

## Inputs/Outputs

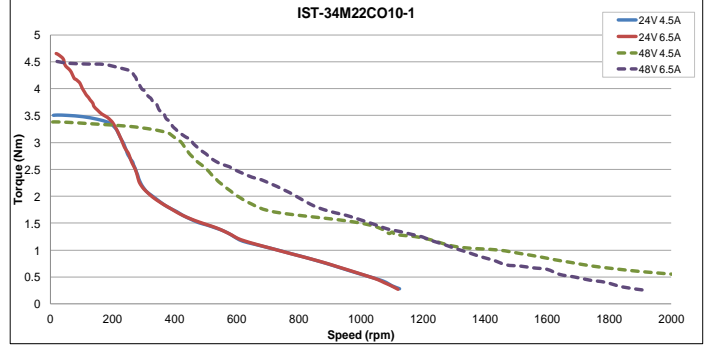
Feature	Specification	
<b>1x Analog Input</b>	Signal	Analog ±10 VDC differential
	Functions	User define
	Input Resolution	12 bit
	Input Impedance	94 kΩ
	Bandwidth (-3 db)	8 KHz
<b>4x Digital Input IP20</b>	Signal	Configurable opto-isolated. User defined compatibility with sinking output or sourcing output.
<b>3x Digital Input IP65</b>	Functions	Homing, limit switch, remote enable, start motion command for profiled position operation mode
	Voltage High Level Input	30 V
	Min. High Level Input VIH	11 V
	Max. Low Level Input VIL	5 V
	Input Resistance	2.2 kΩ
	Max. Input Frequency	1 kHz
	Isolation Voltage	2500 Vrms
	Max. Input Current	According to max. voltage level, input current is not limited, drive limits the input current
	Propagation Delay Time	1 ms
	<b>2x Digital Output IP20</b>	Signal
<b>1x Digital Output IP65</b>	Functions	Motor speed set, Current, Motor speed set clear, Regen resistor control, Motion completed, In position, Zero speed, Software position limit switch, Active, User selectable.
	Voltage	30 V
	Max. Current	500 mA
	Min. Load Resistance	60 Ω
	Output Voltage (VO)	0.25 V
	Min. Propagation Delay Time	1 ms (may be longer if load current is lower)

Speed/torque charts

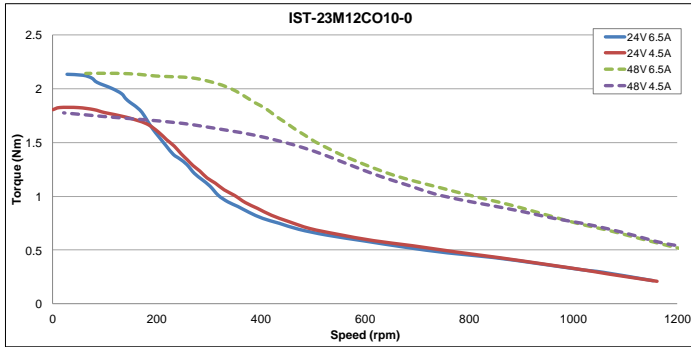
NEMA 23 Short



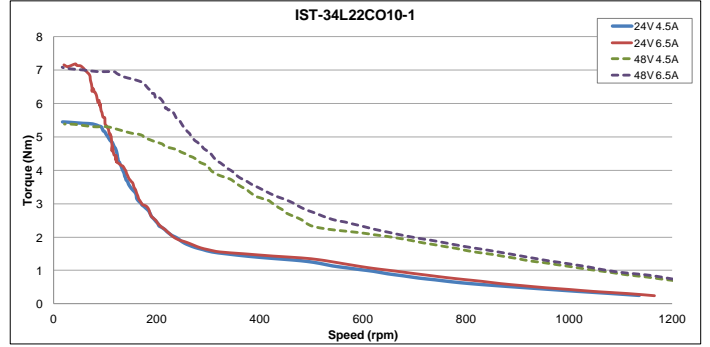
NEMA 34 Medium



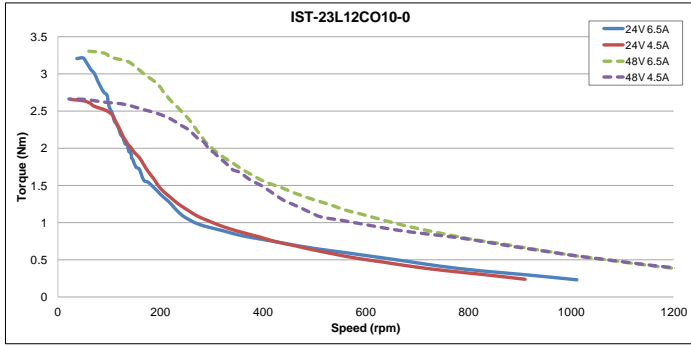
NEMA 23 Medium



NEMA 34 Long



NEMA 23 Long



Ordering information

